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GAIN™— Geospatial Awareness and Intelligence Network

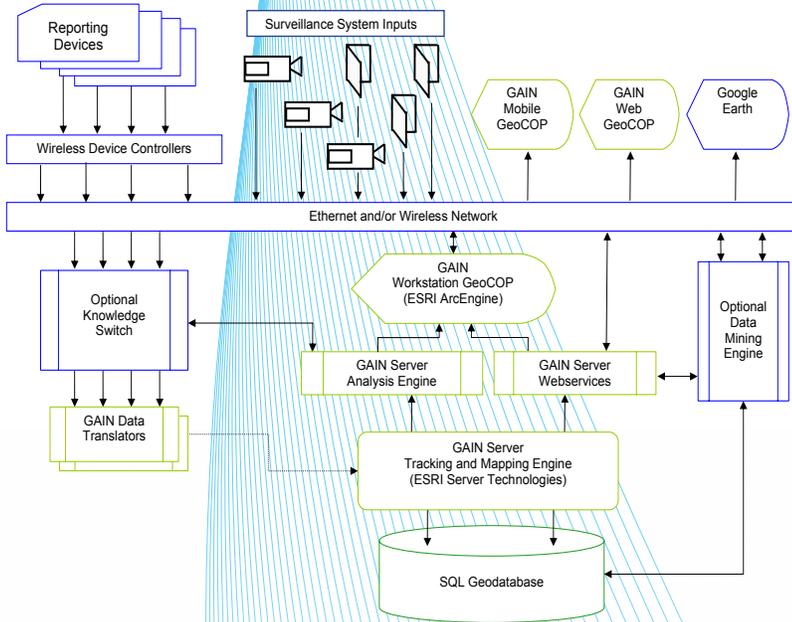
GAIN™ is a security system interface that leverages distributed geospatial mapping technology for critical infrastructure protection. By integrating events and alarms from multiple sensor systems, GAIN provides a common operational picture (COP) of a facility, allowing all security events to be viewed together within the context of a comprehensive view of the interior and exterior zones where the events occur. This view improves speed of access to information by security personnel and management, and allows a more intuitive understanding of the relationships between events reported by disparate sensor systems.



Featured Technologies

- GCS Research GAIN™ Server
- GCS Research GAIN Workstation GeoCOP™
- GCS Research GAIN Web GeoCOP™
- GCS Research .NET* Connector
- GCS Research Flash* Connector
- GCS Research KML* Connector
- Knowledge Vector* KSX
- ESRI Server Technologies*
- ESRI ArcEngine*
- MSFT SQL Server*

GAIN utilizes best-of-breed commercial off the shelf (COTS) components along with custom clients and services employing standard communication and information exchange protocols. This winning combination of technologies allows multiple user classes at distributed locations to view and act on events in a timely manner using the client applications that best fit their particular needs. The GAIN system forms a geospatial service oriented architecture (SOA), providing an enterprise solution for critical infrastructure protection, force protection, and counter-terrorism operations. GAIN couples ESRI server and runtime client components with Web services and an open system framework for integration, visualization, and analysis of XML-based sensor messaging across any IT-centric network. By leveraging standard products and protocols, GAIN eases integration with additional systems and services and ensures system scalability, extensibility and interoperability into the future.



The GAIN System consists of the GAIN Server and an array of GAIN GeoCOP™ user clients. The GAIN Server is the geospatial engine and fuels a server-centric approach to sensor data fusion, geospatial analysis, and distribution of target and threat information to security and management personnel. The GAIN GeoCOP applications display event data and alarms overlaid on an interactive view of the entire facility. Each application is targeted to meet the needs of a specific user group. These include the GAIN Workstation GeoCOP for advanced exploitation and analysis, the GAIN Web GeoCOP for scalable and cost-effective situational awareness in a browser, and the Google Web service connector which translates the core “what, where, and when” of the sensor messaging into Google Earth for visualization convenience and distribution.

GAIN can be used with any sensor system designed to detect threat information. Sensor events are collected and shared through a defined XML-schema to place these data into a robust geospatial context. To achieve and manage sensor message fusion and escalated response, GAIN has been designed to integrate with the Knowledge Switch (KSX) by Knowledge Vector*. The KSX provides a mission critical standard-operating-procedure (SOP) component to the GAIN System, combining the right knowledge, discovery and dissemination solution to critical infrastructure and force protection challenge. GAIN and KSX integration delivers the optimal combination of distributed GEOINT and secure knowledge management through a federated networked approach.



1121 E. Broadway, Suite 113
 Montana Technology Enterprise Center
 Missoula, Montana 59802
 406-532-3254 • info@gcs-research.com
 www.gcs-research.com

